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Remarks

Objections to the Specification

The specification has been objected to as failing to provide proper antecedent basis for the claimed subject matter. The Office Action asserts that while the amendments to the claims 22-24 changing the units from : to :m is not considered new matter as they are equivalent, Applicant must provide antecedent basis in the Specification to include the units :m and/or insertion into the Specification an indication that they are equivalent.

Applicants have amended the Specification where appropriate, to change the units from ":" to ":m". Applicants have also amended the paragraph on page 22 to include the value associated with the units as well. The values are consistent with those given in inches: "about 0.003 inches to about 0.012 inches".

As indicated in the Office Action, ":" is equivalent to ":m". However, the latter has become more universally used. No new matter has been added.

Claim Rejections

I. 35 U.S.C. §112, second paragraph

Claim 9 is rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office Action asserts that claim 9 is unclear by reciting that the magnetic assembly is formed in a roll form on a web.

Claim 9 has been amended. Support is found in the last paragraph of page 15. No new matter has been added. Applicants respectfully request withdrawal of the rejection of claim 9 under 35 U.S.C. §112, second paragraph.

II. 35 U.S.C. §103(a); Bielek et al., Silverschotz et al., Wade, Mueller and/or Yanulis

Claims 1-17, 22-32, 35, 38-41, 72, 75 and 76 have been rejected under 35 U.S.C. §103(a) as obvious over Bielek et al. (US Patent No. 6,387,485) in view of Silverschotz et al. (US Patent No. 5,869,148) as further taken with Wade (US Patent No. 3,470,055), Mueller (US Patent No. 2,690,206), and/or Yanulis (US Patent No. 2,944,586).

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The Office Action asserts that Bielek et al. disclose a process of forming a magnetic assembly (composite substrate 10) by providing a magnetic composition at an elevated temperature (extrusion coated) comprising about 75% to 95% (column 2, lines 41-59) of at least one magnetic material and about 5% to 25% of at least one thermoplastic polymer (column 2, lines 41-59), directly applying the magnetic composition (14) at an elevated temperature when it is pliable to a printable substrate layer (12)(extrusion coated; column 3, lines 19-27).

As to the limitation that the magnetic composition is a hot melt, the Office action further asserts that the binders in Bielek et al. are considered to include hot melt binders. Alternatively, the Office Action has cited Silverschotz to show that it is known that the binders in such magnetic compositions are considered to be hot melt polymers (col. 3, line 22).

The Office Action asserts that it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the method of forming a magnetic assembly as shown by Bielek et al. with a composition that is a hot melt, as the compositions cited in Bielek et al. are considered to be hot melts and additionally since it is known to provide such compositions with hot melt binders as exemplified by Silverschotz.

Applicants traverse the rejection.

Independent claim 1 of the present invention is directed to a process of forming a magnetic assembly having at least one magnetic layer having dimensions of thickness, width and length, and at least one printable substrate layer having dimensions of thickness, width and length, including the steps of providing a magnetic hot melt composition at an elevated temperature, said magnetic hot melt composition comprising about 75 wt-% to about 95 wt-% of at least one magnetic material and about 5 wt-% to about 25 wt-% of at least one thermoplastic polymer; and directly applying the magnetic hot melt composition at an elevated temperature when it is pliable to a printable substrate layer.

Independent claim 72 is directed to the same subject matter as claim 1, with the exception that the magnetic hot melt composition comprises about 85 wt-% to about 95 wt-% of at least one magnetic material and about 5 wt-% to about 15 wt-% of at least one thermoplastic binder.

Independent claim 75 is directed to a process of forming a pad article comprising a plurality of magnetic sheet assemblies.

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Applicants wish to point out that none of the references cited by the Examiner to date, have provided evidence that such an assembly is obvious. As none of the references nor the combination thereof, suggest the all of elements recited in claim 75, Applicants submit that claim 75 is patentable over the prior art of record.

Applicants submit that Beilek et al. disclose a flexible composite which includes a flexible carrier, a first adhesive and a second adhesive. The first adhesive is adhered to the flexible carrier and includes ferromagnetic material. (Abstract)

The ferromagnetic material, in a powdered or particulate form, may be any of steel, iron oxide ferrite, magnetite, iron, nickel, cobalt, etc., and the size of the particles may be between 1 nm to 5 mm. The particles are dispersed into a flexible binder which may be formed of polyurethane, polyester, and polyolefins, as well as a pressure sensitive adhesive. Adding a sufficient amount of the ferromagnetic material to a binder formed of a pressure sensitive adhesive, however, significantly decreases the strength (or tack) of the pressure sensitive adhesive. The ratio by weight of ferromagnetic material to binder material may be from about 4/10 to about 9/1, and is preferably in the range of about 7.5/2.5 to about 9/1. The binder material should also permit uniform distribution of the ferromagnetic material within the binder, and form a sufficient adhesion with the film.

As an example, Bielek et al. suggest the ferromagnetic adhesive layer may be formed of 85 parts stainless steel particulate 410L with a particle size rated at 325 mesh as sold by Ametek, Specialty Products Division, of the town of Eighty Four, Pa. The resin may be formed of 15 parts (solids) of VITEL™ 3350 polyester resin as sold by Bostic, Inc. of Middleton, Mass. The VITEL™ resin together with the stainless steel particulate, adheres sufficiently well to the carrier, but would not adhere sufficiently well to a wide variety of receiving surfaces to which composites of the invention may be applied (see col. 2, lines 42-59). Thus, Bielek et al. describe the use of a second adhesive to sufficiently adhere to a receiving surface.

The Office Action asserts, page 4, beginning at paragraph 3 to the top of page 4, that as to the limitation that the magnetic composition be applied at an elevated temperature as recited in Applicants' claims, Bielek et al. is considered to meet this limitation by disclosing the magnetic composition is applied by extrusion coating (column 3, lines 19-27). Optionally, the references Wade, Mueller, Yanulis are cited to show that it is conventionally known in the art

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that extrusion coated polymeric layers are applied at elevated temperatures. The Office Action asserts that therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to form the magnetic assembly as shown by Bielek et al. by providing the magnetic composition at an elevated temperature as is conventionally known for extrusion coating of polymeric materials and as optionally further exemplified by Wade, Mueller and Yanulis.

Applicants disagree.

First, Applicants acknowledge that Bielek et al. do suggest that in various embodiments, composites of the invention may be incorporated into a polymeric sheet, or combined with polymeric material through processes such as *co-extrusion*, *extrusion coating*, and *laminating*. For example, a white polyester film may be extrusion coated with the ferromagnetic adhesive layer. See col. 3, lines 19-24.

However, extrusion does not inherently suggest elevated temperatures, contrary to what is asserted on page 4, second paragraph of the Office Action. Water based and solvent based systems may be applied by extrusion as well. See, for example, U.S. Patent Nos. 4417695; 5985030. Thus, extrusion may be conducted and often is, at ambient temperatures, with other than hot melt systems.

Applicants do acknowledge that extrusion of hot melt adhesives is known.

However, direct application of the magnetic compositions recited in claims 1 and 72 to a printable substrate at an elevated temperature is not known, nor is it obvious from these references. Such magnetic compositions have, in the past, been molded and then applied to a substrate, but not directly applied to a printable substrate layer at an elevated temperature.

Bielek et al. do not teach or suggest extrusion at elevated temperatures, nor do they teach or suggest hot melt adhesives.

Applicants submit that the compositions described by Bielek et al. are in fact solution, emulsion or dispersion adhesives. Bielek et al.'s description of the ferromagnetic adhesive layer as being formed of 85 parts stainless steel particulate 410L and the resin being formed of 15 parts (*solids*) of VITEL™ 3350 polyester resin sold by Bostic, Inc. (col. 2, lines 63-65) is indicative of a system other than a hot melt, as hot melts are 100% solids systems. Water base emulsions, for example, are referred to by parts (solids) basis. The resin content of hot melts is not conventionally referred to in this way because they are considered 100% solids

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systems. Therefore, Bielek et al.'s composition must be understood to contain volatiles that assist in forming an extrudable paste, emulsion, slurry, dispersion or the like, but which will be lost upon drying.

Furthermore, the VITEL™ co-polyesters are available in a variety of forms including extrudable and limited solubility coating resins, solution adhesive resins, hot melt extrusion resin modifiers. See <http://www.bostikfindley-us.com/products/index.asp?fa=categories&divisionId=9&categoryId=35>, a copy of which is enclosed herewith. Since Beilek et al. refer to VITEL® 3350, a resin, not a resin modifier, it is Applicants' assertion that Bielek et al. do not suggest hot melt adhesives which are 100% solids.

Solvent dispersion and emulsion resin systems are typically applied at ambient temperature. Thus, Bielek et al. do not suggest hot melt adhesives or extrusion at elevated temperatures.

Further, Bielek et al. suggest that the second adhesive, a pressure sensitive adhesive, may be formed of an acrylic such as Robond 7627 as sold by Rohm & Haas of Philadelphia, PA; or Acrylic 80-1054 as sold by National Starch and Chemical Co. in Somerville, N.J. or GMS 788 as sold by Solutia of Springfield, Mass; or may be a rubber based pressure sensitive adhesive such as PSA 36-6083 as sold by National Starch and Chemical Company. See col. 3, lines 8-16.

Applicants could find none of the specific product numbers indicated by Bielek et al. However, the Robond products from Rohm & Haas are water based adhesives. See <http://www.rohmhaas.com/AdhesivesSealants/NewsReleases/010903.html>; <http://www.rohmhaas.com/company/NewsReleases/010702.html>; <http://www.rohmhaas.com/AdhesivesSealants/NewsReleases/082004.html>; and http://www.rohmhaas.com/AdhesivesSealants/product_lines/adhesives.html, for example.

Solutia's acrylic pressure sensitive adhesives, were sold to UCB Chemicals. These acrylic pressure sensitive adhesives are also dispersions and solutions. See <http://www.surfacepecialties.ucb-group.com/adhesives.html> and http://www.ucb-chemicals.com/b_units/b5adhes/content.html.

Applicants could find no information relating to the specific acrylic pressure sensitive adhesive, Acrylic 80-1054, or the rubber based pressure sensitive adhesive, PSA 36-

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6083, sold by National Starch and Chemical Co. as indicated by Bielek et al.

However, there is considerable evidence that such pressure sensitive adhesives are also solution, emulsion or dispersion adhesives. For example, see

<http://www.bondmaster.com/gpaAdhesives.asp>;

<http://news.nationalstarch.com/NewsStory.asp?newsItemId=453>; and

<http://news.nationalstarch.com/NewsStory.asp?newsItemId=422>.

Copies of all of the above-referenced web pages have been enclosed herewith.

Further, accompanying this Amendment is a declaration by Thomas H. Quinn who is qualified as an expert in the hot melt adhesive art. The declaration is being submitted under 35 U.S.C. §1.132 in support of the patentability of the present invention. It is Tom's expert opinion that Bielek et al., do not suggest hot melt adhesives which are 100% solids systems, but rather are teaching solution adhesives.

Consequently, it is our position that none of the compositions suggested by Bielek et al. are hot melts. They are solution, emulsion or dispersion adhesives. Nor does Bielek et al. suggest application of such compositions at elevated temperatures as required by independent claims 1 or 72 of the present invention.

The Office Action asserts that it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the method of forming a magnetic assembly as shown by Bielek et al. with a composition that is a hot melt, as the compositions cited in Bielek et al. are considered to be hot melts and additionally since it is known to provide such compositions with hot melt binders as exemplified by Silverschotz et al.

Applicants have shown that the compositions suggested in Bielek et al. are in fact *not* hot melts, but rather are water-borne or solvent-borne systems.

Silverschotz et al. suggests hot melts, but, as shown in the previous response, Silverschotz et al. suggests different amounts of polymer for aqueous or solvent based systems, than for hot melt systems. As suggested by Silverschotz et al., for the aqueous or solvent based system, the polymer is between 2 and 20% and preferably between 4 and 8% by weight of the total formula, such an amount is consistent with Bielek et al. whose technology is also water borne or solvent borne. For the hot melt polymer binder system, Silverschotz et al. suggest a polymer amount of preferably 30 to 60% by weight of the mixture. See col. 3, lines 19-27. This

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difference is seen in part, to be a function of the low viscosity of the water or solvent carrier. Elimination of the carrier reduces the amount of ferromagnetic material that can successfully be incorporated into the resin system.

A composition having water or solvent makes it extrudable at room temperature so that you are not relying on the fluidity of a melted resin to make the composition extrudable. Hot melt viscosities are higher than the viscosities of dispersion or emulsion systems. Thus, if you are relying on fluidity for extrusion, you will have to use less magnetic material. This is taught by Silverschotz. Applicants submit that the level of materials suggested by Bielek et al. is in fact consistent with the solvent or water based systems of Silverschotz. Thus, combining these two references, does not lead one to the method of the present invention.

Independent claim 1 of the present application recites a magnetic composition having about 5 wt-% to about 25 wt-% of a hot melt binder and 75 wt-% to 95 wt-% of the magnetic material, the composition of which is not suggested by the combination of Bielek et al. and Silverschotz et al. and independent claim 72 recites a magnetic composition having about 5 wt-% to about 15 wt-% of a hot melt binder and about 85 wt-% to about 95 wt-% of the magnetic material.

Applicants submit that the combination does not suggest the hot melt levels of independent claims 1 or 72, nor does the combination suggest the application of such combination at elevated temperatures to a printable substrate layer.

Yanulis is directed to an extrusion coating apparatus for plastics. There is no suggestion to employ such an apparatus for a magnetic composition as in the present application.

Wade is directed to an extrusion coating method for a polymeric resin. There is no suggestion to employ such an apparatus for a magnetic composition as in the present application.

Mueller is directed to an extrusion coating machine for thermoplastics. Again, there is no suggestion to employ such a machine for a magnetic composition as in the present application.

Consequently, this combination of references, fails to provide a magnetic composition as recited in independent claims 1 and 72 directly applied to a printable substrate, as Bielek et al. do not suggest hot melts, Silverschotz et al. suggest hot melts but at higher polymer

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loadings, and Yanulis, Wade and Mueller, are directed to extrusion coating of plastics or polymer resins, but not to magnetic compositions.

Claims 2-17, 22-32, 35 and 38-41 depend from claim 1 and are patentable for at least the reasons that claim 1 is patentable.

Claim 75 is patentable for at least the reasons that claim 1 is patentable, and further for the reason that the combination of references fails to teach a process for making a pad article comprising a plurality of magnetic assemblies.

Claim 75 has been amended to incorporate the limitations of claim 76. Support is also found on page 17, last paragraph.

The Examiner argues that it is considered well known in the packaging arts to package groups of items such as novelty items as disclosed by Bielek et al. by stacking the items into a pad and binding by either adhesive or shrink wrap, and that only the expected results would be attained by employing such a well known and conventional packaging practice to the novelty item in Bielek et al. for distribution.

However, we submit that neither Silverschotz et al. nor Bielek et al., suggest the formation of such an assembly as found in claim 75, and that if such an assembly were so obvious, it would surely at least merit mentioning such an assembly therein.

The Examiner has provided no evidence whatsoever to support the conclusion that it is known in the art to make a pad assembly comprising a plurality of magnetic assemblies as described in the present application and as found in claim 75. Applicants further assert that such a pad article comprising a plurality of magnetic sheet assemblies is novel and unobvious over conventional paper notepads.

Applicants submit that according to MPEP 2144.03B., ordinarily, there must be some form of evidence in the record to support an assertion of common knowledge. The MPEP refers us to *Lee*, 277 F.3d at 1344-45, 61 USPQ2d at 1434-35 (Fed. Cir. 2002); *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697, holding that general conclusions concerning what is "basic knowledge" or "common sense" to one of ordinary skill in the art without specific factual findings and some concrete evidence in the record to support these findings will not support an obviousness rejection.

Furthermore, it is found in MPEP 2144.03C., that if an Applicant challenges a

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factual assertion as not properly officially noticed or not properly based upon common knowledge, the examiner must support the finding with adequate evidence.

Applicants submit that claim 75 is patentable over the prior art of record, and that the Examiner has not provided sufficient evidence to the contrary.

Based on the foregoing, Applicants respectfully request withdrawal of the rejection of claims 1-17, 22-32, 35, 38-41, 72 and 75 under 35 U.S.C. §103(a) as obvious over Bielek et al. (US Patent No. 6,387,485) in view of Silverschotz et al. (US Patent No. 5,869,148) as further taken with Wade (US Patent No. 3,470,055), Mueller (US Patent No. 2,690,206), and/or Yanulis (US Patent No. 2,944,586).

III. 35 U.S.C. §103(a); Bielek et al., Silverschotz et al., Wade, Mueller and/or Yanulis and Marshall et al.

Claims 1-10, 13-17, 22-32, 35, 38-41 and 72 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Bielek et al. (US Patent No. 6,387,485) in view of Silverschotz et al. (US Patent No. 5,869,148) as further taken with Wade (US Patent No. 3,470,055), Mueller (US Patent No. 2,690,206), and/or Yanulis (US Patent No. 2,944,586) as applied to claims above, and further in view of Marshall et al. (US Patent No. 5,503,891).

The Office Action asserts that "[a]s to the claimed percentages of the magnetic composition, Bielek et al. appears to disclose at least up to 90% magnetic particles. It is known in the art to provide at least up to 96% magnetic particles in magnetic compositions in order to provide a stronger magnetic force. For example, Marshall discloses an example of a magnetic assembly where the magnetic composition layer comprises between 60 and 96% magnetic particles (column 2, lines 15-20). It would have been obvious to one of ordinary skill in the art at the time of the invention to form the magnetic assembly in Bielek with known percentages in the art of magnetic particles in the magnetic composition in order to provide the desired amount of magnetic strength in the finished product as exemplified by Marshall, only the expected results would be attained."

Applicants traverse the rejection.

Independent claims 1 and 72 have been discussed above.

Bielek et al., Silverschotz et al., Wade, Mueller and Yanulis have been discussed

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above.

Independent claims 1 and 72 are patentable over this combination of references for at least the reasons discussed above. The combination fails to suggest a magnetic hot melt composition which is applied to a printable substrate layer at an elevated temperature.

Applicants submit that Marshall et al. disclose a flexible and magnet attractant display mat for receiving magnetic display symbols (Abstract). The display mat includes a magnet attractant substrate formed of a ferrous/ferrite powder filler, uniformly dispersed throughout a polymeric binder such that the powder filler comprises 60 to 96 percent by weight of the substrate, the powder filler comprises atomized spherically shaped particles and wherein the substrate is rollable for storage and transport, the magnet attractant substrate is in the range of approximately 0.250 to 0.750 mm thickness, and the mat further comprises a display surface composed of polyvinyl chloride overlying and adhesively bonded to the substrate (see claim 1).

Applicants submit that the substrate is manufactured by cast extrusion having between 4 to 40% polymeric binder and between 60 to 96% iron powder filler. A specific example is one which is manufactured by DuPont. The substrate is then purchased from DuPont, and then adhered to a display surface composed of an extrusion laminate of semi-rigid plastics. One method of adhering the display surface on to the substrate is to mechanically laminate a 50 micron dry mount acid-free adhesive film. The film melts upon heating and as such, the display surface, adhesive film and substrate are heated together and then pressed using a hydraulic press, or rollers (see col. 2, lines 13-61).

Thus, the substrate and the display surface of Marshall are manufactured in two different places, and brought together later through the use of an adhesive.

Applicants submit that combining Marshall with Bielek et al., Silverschotz, Wade, Mueller, and Yanulis, does not lead one of skill in the art to the invention of independent claims 1 or 72. Claims 2-10, 13-17, 22-32, 35 and 38-41 depend from claim 1 and are patentable for at least the reasons that claim 1 is patentable.

Applicants respectfully request withdrawal of the rejection of claims 1-10, 13-17, 22-32, 35, 38-41 and 72 under 35 U.S.C. §103(a) as being unpatentable over Bielek et al. (US Patent No. 6,387,485) in view of Silverschotz et al. (US Patent No. 5,869,148) as further taken with Wade (US Patent No. 3,470,055), Mueller (US Patent No. 2,690,206), and/or Yanulis (US

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Patent No. 2,944,586) as applied to claims above, and further in view of Marshall et al. (US Patent No. 5,503,891).

IV. 35 U.S.C. §103(a) Bielek et al., Silverschotz et al., Wade, Mueller and/or Yanulis, Marshall et al. and Rippingale et al.

Claims 5 and 77 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Bielek et al. (US Patent No. 6,387,485) in view of Silverschotz et al. (US Patent No. 5,869,148) as further taken with Wade (US Patent No., 3,470,055), Mueller (US Patent No. 2,690,206), and/or Yanulis (US Patent No. 2,944,586) and optionally further in view of Marshall et al. (US Patent No. 5,503,891) as applied to claim 1 above, and further in view of Rippingale et al. (US Patent No. 5,114,517).

The Office Action asserts that as to claim 77, the limitations similar to claim 1 are rejected as discussed above with reference to claim 1. As to claims 5 and 77, the Office Action asserts that Bielek et al. disclose subjecting the extruded layer to a magnetic field, but does not disclose if this is done while the extruded layer is still at an elevated temperature, but that Rippingale discloses subjecting an extruded magnetic layer to a magnetic field in order to provide a magnetic effect in the assembly (column 3, lines 10-28), and that it would have been obvious to one of ordinary skill in the art at the time of the invention, to provide the method of forming a magnetic assembly to a magnetic field while the extruded layer is at an elevated temperature in order to provide a magnetic effect in the assembly while the magnetic particles can still be aligned as shown by Rippingale.

Applicants traverse the rejection.

Applicants submit that, as discussed above, Bielek et al. do not disclose extrusion at an elevated temperature at all. Thus, it is very safe to say that they are not subjecting the extruded layer to a magnetic field at an elevated temperature.

Claim 1 of the present invention has been discussed above and is directed to application of a magnetic hot melt composition at an elevated temperature, to a printable substrate layer. Claim 5 depends from claim 1.

Bielek et al., Silverschotz et al., Wade, Mueller, Yanulis and Marshall et al. have

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been discussed above, and the combination fail to disclose all of the elements of claim 1.

Applicants assert that Rippingale et al. disclose a magnetic marker serving to locate, trace, and identify an elongated hidden object, such as a buried utility pipe, duct, conduit, or fiber optic cable, is manufactured by applying magnetic material to a substrate that is elongated and by forming from the material a helical or twisted permanent magnet pattern extending along the length of the substrate (Abstract).

Combining the magnetic marker of Rippingale et al. with the other references discussed above, does not lead one of skill in the art to the application of a magnetic hot melt composition at an elevated temperature to a printable substrate as recited in claim 1. Claim 5 depends from claim 1 and is patentable for at least the reasons that claim 1 is patentable.

As for claim 77, it is directed to the same process as claim 1, but with the added step of magnetizing the magnetic hot melt composition when it is at an elevated temperature.

Claim 77 has been amended such that the language is more consistent with that of claim 1, and to clarify that by "magnetizing" it is meant "permanently magnetizing" as described at the bottom of page 4 of the present specification, and permanent magnetization occurs when the material is at an elevated temperature.

Claim 77 is patentable over the previously discussed combination at least for the reasons that claim 1 is patentable over the previous combination.

With respect to Rippingale et al., Applicants submit that Rippingale et al. teach application of a first, relatively weak magnetic field, while the plastic is still soft, and teach application of a second much stronger magnetic field after the plastic material has cooled sufficiently to be stable. Thus, it can be concluded that the material is not permanently magnetized until the second application of a magnetic field when the plastic material has cooled and is not "soft". See column 3, lines 11-28.

Bielek et al. do not disclose magnetizing of their material at all, but do state that by choosing the proper metal to metal oxide ratio, the resulting magnetically susceptible coating may be modified to be a magnetic coating via a *post-coating* exposure to a high magnetic field (col. 4, lines 1-8).

Claim 77 is directed to a process wherein applying and magnetizing are accomplished in a single process.

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Consequently, the combination of Bielek et al., with the other references as discussed above, and with Rippingale et al., does not lead one of skill in the art to the unitary process of claim 77, wherein a magnetic hot melt composition is both applied to a printable substrate layer, and magnetized at an elevated temperature.

Applicants respectfully request withdrawal of the rejection of claims 5 and 77 under 35 U.S.C. §103(a) as being unpatentable over Bielek et al. (US Patent No. 6,387,485) in view of Silverschotz et al. (US Patent No. 5,869,148) as further taken with Wade (US Patent No., 3,470,055), Mueller (US Patent No. 2,690,206), and/or Yanulis (US Patent No. 2,944,586) and optionally further in view of Marshall et al. (US Patent No. 5,503,891) as applied to claim 1 above, and further in view of Rippingale et al. (US Patent No. 5,114,517).

V. 35 U.S.C. §103(a); Bielek et al., Silverschotz et al., Wade, Mueller and/or Yanulis, Marshall et al. and Sawa

Claims 17 and 19-21, have been rejected under 35 U.S.C. §103(a) as being unpatentable over Bielek et al. (US Patent No. 6,387,485) in view of Silverschotz et al. (US Patent No. 5,869,148) as further taken with Wade (US Patent No., 3,470,055), Mueller (US Patent No. 2,690,206), and/or Yanulis (US Patent No. 2,944,586) and optionally further in view of Marshall et al. (US Patent No. 5,503,891) as applied to claim 1 above, and further in view of Sawa (US Patent No. 4,022,701).

Applicants traverse the rejection.

Claims 17 and 19-21 depend from claim 1 which has been discussed above.

Claim 1 is patentable over Bielek et al., Silverschotz et al., Wade, Mueller, Yanulis, and Marshall, as discussed above.

Applicants submit that Sawa discloses high-performance anisotropic plastics magnet made of a mixture of ferromagnetic powder having a large magnetic anisotropy constant and a thermoplastic resin, which are formed by molding. References to molding are found throughout the specification.

Thus, further combining Sawa with all of the other references previously discussed, does not lead one of skill in the art to the invention of claim 1 from which claims 17 and 19-21 depend.

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Applicants respectfully request withdrawal of the rejection of claims 17 and 19-21 under 35 U.S.C. §103(a) as being unpatentable over Bielek et al. (US Patent No. 6,387,485) in view of Silverschotz et al. (US Patent No. 5,869,148) as further taken with Wade (US Patent No., 3,470,055), Mueller (US Patent No. 2,690,206), and/or Yanulis (US Patent No. 2,944,586) and optionally further in view of Marshall et al. (US Patent No. 5,503,891) as applied to claim 1 above, and further in view of Sawa (US Patent No. 4,022,701).

VI. 35 U.S.C. §103(a); Bielek et al., Silverschotz et al., Wade, Mueller and/or Yanulis, Marshall et al. and Charley

Claims 33, 34, 36 and 37 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Bielek et al. (US Patent No. 6,387,485) in view of Silverschotz et al. (US Patent No. 5,869,148) as further taken with Wade (US Patent No., 3,470,055), Mueller (US Patent No. 2,690,206), and/or Yanulis (US Patent No. 2,944,586) and optionally further in view of Marshall et al. (US Patent No. 5,503,891) as applied to claim 1 above, and further in view of Charley (US Patent NO. 6,153,279).

Applicants traverse the rejection.

Claims 33, 34, 36 and 37 depend from claim 1 which has been discussed above.

Bielek et al., Silverschotz et al., Wade, Mueller, Yanulis, and Marshall have been discussed above.

Claim 1 is patentable over this combination as discussed above.

Applicants submit that Charley disclose a label for attachment to a substrate, including a flexible magnet having printed material on one surface. The label consists of a thin, flat, flexible magnet having a first surface and a second surface, printed material attached to the first surface of the flexible magnet, a transparent covering attached to the printed material, a clear base material attached to the second surface of the magnet, a clear film easily separable from the clear base material, an adhesive backing attached to the clear film, and a liner material covering the adhesive backing. The liner material may be removed from the adhesive backing whereby the label may be applied to a substrate by means of the adhesive backing. After separating the clear film and clear base material the clear base material covers the second surface of the magnet and the clear film covers the adhesive backing applied to the substrate (Abstract).

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Applicants submit that Charley also discloses a complex process for making the same.

Combining Charley with all of the other references discussed above, does not lead one of skill in the art to the invention of claim 1. Claims 33, 34, 36 and 37 depend from claim 1 and are patentable for at least the reasons that claim 1 is patentable.

Applicants respectfully request withdrawal of the rejection of claims 33, 34, 36 and 37 under 35 U.S.C. §103(a) as being unpatentable over Bielek et al. (US Patent No. 6,387,485) in view of Silverschotz et al. (US Patent No. 5,869,148) as further taken with Wade (US Patent No. 3,470,055), Mueller (US Patent No. 2,690,206), and/or Yanulis (US Patent No. 2,944,586) and optionally further in view of Marshall et al. (US Patent No. 5,503,891) as applied to claim 1 above, and further in view of Charley (US Patent NO. 6,153,279).

VII. 35 U.S.C. §102(e), or in the alternative, 35 U.S.C. §103(a); Bielek et al., Wade, Mueller and/or Yanulis

Claim 60 has been rejected under 35 U.S.C. §102(e) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Bielek et al. (US Patent No. 6,387,485) as taken with Wade (US Patent No. 3,470,055), Mueller (US Patent No. 2,690,206), and/or Yanulis (US Patent No. 2,944,586).

The Office Action asserts that Bielek et al. disclose a process of forming a magnetic assembly (composite substrate 10) by extruding at an elevated temperature (extrusion coated) a magnetic composition (14) comprising about 70% to 95% (column 2, lines 41-59) of at least one magnetic material and about 5% to 30% of at least thermoplastic polymer (column 2, lines 41-59), onto a printable substrate layer (12) (extrusion coated; column 3, lines 19-27).

The Office Action asserts that as to the magnetic composition being applied at an elevated temperature, Bielek et al. is considered to meet this limitation by disclosing the magnetic composition is applied by extrusion coating (column 3, lines 19-27).

Applicants submit that they have proven above why it is incorrect that the disclosure that a composition is applied by extrusion can be equated with elevated temperature, and that Bielek et al. in fact do not disclose extrusion at an elevated temperature, do not disclose magnetic hot melt compositions and thus do not meet the limitation of applying a magnetic

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composition at an elevated temperature.

Claim 60 is directed to a process of forming a magnetic assembly having at least one magnetic layer having dimensions of thickness, width and length, and at least one printable substrate layer having dimensions of thickness, width and length, comprising the step of extruding in final form at an elevated temperature directly onto said printable substrate layer a magnetic composition comprising about 70 wt-% to about 95 wt-% of at least one magnetic material and about 5 wt-% to about 30 wt-% of at least one thermoplastic polymer which is a member selected from the group consisting of natural rubbers, block copolymers, polyolefins, polyalphaolefins, copolymers thereof, and mixtures thereof onto a printable substrate layer.

Claim 60 has been amended to clarify that the magnetic composition is a hot melt, and also to clarify that the magnetic hot melt composition is applied directly to the printable substrate layer at an elevated temperature.

Claim 60 is seen as being patentably distinct from Bielek et al. for at least the reasons that claim 1 is patentable over Bielek et al. Applicants therefore respectfully request withdrawal of the rejection of claim 60 under 35 U.S.C. §102(e) as being unpatentable over Bielek et al., US Patent No. 6,387,485.

Wade, Mueller, and Yanulis have been discussed above.

Claim 60 is patentable over the combination of Beilek et al., Wade, Mueller and Yanulis, for at least the reasons that claim 1 is patentable over Beilek et al., Wade, Mueller and Yanulis.

Applicants respectfully request withdrawal of the rejection of claim 60 under 35 U.S.C. §102(e) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Bielek et al. (US Patent No. 6,387,485) as taken with Wade (US Patent No. 3,470,055), Mueller (US Patent No. 2,690,206), and/or Yanulis (US Patent No. 2,944,586).

VIII. 35 U.S.C. §103(a); Bielek et al., Wade, Mueller and/or Yanulis and Marshall et al.

Claims 60 and 78 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Bielek et al. (US Patent NO. 6,387,485) as taken with Wade (US Patent No. 3,470,055), Mueller (US Patent No. 2,690,206), and/or Yanulis (US Patent No. 2,944,586) and

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further in view of Marshall et al. (US Patent No. 5,503,891).

The Office Action asserts that "[a] to the claimed percentages of the magnetic composition, Bielek appears to disclose at least up to 90% magnetic particles. It is known in the art to provide at least up to 96% magnetic particles in magnetic compositions in order to provide a stronger magnetic force. For example, Marshall discloses an example of a magnetic assembly where the magnetic composition layer comprises between 60 and 96% magnetic particles (column 2, lines 15-20). It would have been obvious to one of ordinary skill in the art at the time of the invention to form the magnetic assembly in Bielek with known percentages in the art of magnetic particles in the magnetic composition in order to provide the desired amount of magnetic strength in the finished product as exemplified by Marshall, on the expected results would be attained.

Claim 60 has been discussed above.

Bielek et al., Wade, Mueller, Yanulis and Marshall et al. have been discussed above.

Claim 60 is patentable over this combination of references for the reasons discussed above.

Claim 78 depends from claim 60 and is patentable for at least the reasons that claim 60 is patentable.

Applicants respectfully request withdrawal of the rejection of claims 60 and 78 under 35 U.S.C. §103(a) as being unpatentable over Bielek et al. (US Patent NO. 6,387,485) as taken with Wade (US Patent No. 3,470,055), Mueller (US Patent No. 2,690,206), and/or Yanulis (US Patent No. 2,944,586) and further in view of Marshall et al. (US Patent No. 5,503,891).

VTV. 35 U.S.C. §103(a); Bielek et al., Wade, Mueller and/or Yanulis and Marshall et al., Gregory, Christel and/or Thompson

Claims 79 and 80 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Bielek et al. (US Patent NO. 6,387,485) as taken with Wade (US Patent No. 3,470,055), Mueller (US Patent No. 2,690,206), and/or Yanulis (US Patent No. 2,944,586) and further in view of Marshall et al. (US Patent No. 5,503,891) as applied to claim 1 above, and further in view of Gregory (US Patent No. 4,941,935), Christel (US Patent No. 5,676,791) and/or

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Thompson (US Patent No. 4,455,184).

The Office Action asserts that "Bielek does not specifically disclose the particular rate in which the magnetic layer is applied to the printable substrate layer. However, it would have been well within the purview of one of ordinary skill in the art to select the appropriate rate for the particular materials used, the end product requirements of thickness and adhesion, etc. Additionally, Gregory, Christel, and/or Thompson are cited to show that the claimed ranges of application rates are known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to form the magnetic assembly as shown by Bielek with an appropriate application rate as is considered well within the purview of one of ordinary skill in the art to select and as further shown by Gregory, Christel, and/or Thompson as being within the known ranges, only the expected results would be attained."

Applicants traverse the rejection.

Claim 1 has been discussed above and is patentable over Bielek et al., Wade, Marshall et al., Yanulis and Marshall et al. as discussed above.

Gregory discloses substrates coated by a process which comprises co-extruding onto the substrate, e.g. aluminum foil, a layer of an olefin terpolymer and a layer of polypropylene, the olefin terpolymer being adjacent to the substrate and the polypropylene being adjacent to the olefin terpolymer (See Abstract).

Gregory does not disclose direct application of a magnetic hot melt composition at an elevated temperature to a printable substrate as recited in claim 1 of the present application.

Christel discloses a device and a process for producing extrusion-coated laminates. The extrusion device contains an extruder nozzle with nozzle lip, a cooling roller and a contact roller, wherein the cooling roller and the contact roller form a roller gap and the extruder nozzle is directed towards the roller gap. A melt of thermoplastic plastics, which enters the roller gap while forming a coating film and is joined to a substrate film in the roller gap, emerges from the nozzle lip. A device for improving the adhesion of the coating film to the substrate is thus disposed in the region between the extruder nozzle and the roller gap at a slight distance from the film. The device is a corona treatment station which has a discharge electrode at high voltage and an electrically earthed counter-electrode on only one side of the coating film (Abstract).

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Christel does not disclose direct application of a magnetic hot melt composition to a printable substrate at an elevated temperature as recited in claim 1 of the present application.

Thompson discloses a process for the lamination of a polyester, particularly polyethylene terephthalate, to a paperboard substrate which comprises coextruding a polyester layer and a polymeric adhesive layer onto a paperboard substrate (see Abstract).

Thompson does not disclose direct application of a magnetic hot melt composition as specified to a printable substrate at an elevated temperature as recited in claim 1 of the present application.

Combining Gregory, Christel and Thompson with Bielek et al., Wade, Mueller, Yanulis, and Marshall et al. does not lead one of skill in the art to the invention of claim 1.

Claims 79 and 80 depend from claim 1 and are patentable for at least the reasons that claim 1 is patentable.

Applicants respectfully request withdrawal of the rejection of under 35 U.S.C. §103(a) as being unpatentable over Bielek et al. (US Patent NO. 6,387,485) as taken with Wade (US Patent No. 3,470,055), Mueller (US Patent No. 2,690,206), and/or Yanulis (US Patent No. 2,944,586) and further in view of Marshall et al. (US Patent No. 5,503,891) as applied to claim 1 above, and further in view of Gregory (US Patent No. 4,941,935), Christel (US Patent No. 5,676,791) and/or Thompson (US Patent No. 4,455,184).

X. 35 U.S.C. §103(a); Silverschotz et al. in view of Rippingale et al.

Claim 77 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Silverschotz et al. (US Patent No. 5,869,148) further in view of Rippingale et al. (US Patent No. 5,114,517).

The Office Action asserts that:

Silverschotz discloses a process of forming a magnetic assembly by providing a magnetic composition (601) at an elevated temperature comprising at least one magnetic material and at least one thermoplastic polymer (column 2, lines 19-27; using a hot melt polymer; column 3, line 22), and directly applying the magnetic layer at an elevated temperature when it is pliable to a printable substrate layer (web 200)(the hot melt composition is coated onto the substrate layer). Silverschotz discloses the composition comprising 70% magnetic material and 30% polymer (column 3, lines 25-30).

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Silverschotz disclose subjecting the extruded layer to a magnetic field, but does not disclose if this is done while the extruded layer is still at an elevated temperature. Rippingale discloses subjecting an extruded magnetic layer to a magnetic field in order to provide a magnetic effect in the assembly (column 3, lines 10-28). The magnetic assembly is subjected to a magnetic field while the magnetic composition is at an elevated temperature in order to allow the proper alignment of the magnetic particles while the material is still soft (column 3, line 20). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the method of forming a magnetic assembly as shown by Silverschotz by subjecting the assembly to a magnetic field while the extruded layer is at an elevated temperature in order to provide a magnetic effect in the assembly while the magnetic particles can still be aligned as shown by Rippingale.

Claim 77 has been discussed above and is directed to a process of forming a magnetic assembly including the steps of providing a magnetic hot melt composition at an elevated temperature, said magnetic hot melt composition comprising about 70 wt-% to about 95 wt-% of at least one magnetic material and about 5 wt-% to about 30 wt-% of at least one thermoplastic polymer, directly applying said magnetic layer at an elevated temperature when it is pliable to a printable substrate layer to form a magnetic assembly and permanently magnetizing said magnetic layer when it is at an elevated temperature.

As discussed above, claim 77 has been amended to clarify that the magnetic assembly is permanently magnetized at an elevated temperature.

Claim 77 has been discussed with respect to Rippingale et al., above.

Applicants submit that Rippingale et al. teach application of a first, relatively weak magnetic field, while the plastic is still soft, and teach application of a second much stronger magnetic field after the plastic material has cooled sufficiently to be stable. Thus, it can be concluded that the material is not permanently magnetized until the second application of a magnetic field when the plastic material has cooled and is not "soft". See column 3, lines 11-28.

Thus, combining the two step magnetization of Rippingale et al. with the process of Silverschotz et al. does not lead one of skill in the art to the invention of claim 77. Applicants respectfully request withdrawal of the rejection of claim 77 under 35 U.S.C. §103(a) as being unpatentable over Silverschotz et al. (US Patent No. 5,869,148) further in view of Rippingale et al. (US Patent No. 5,114,517).

Thus, based on the foregoing arguments, it is clear that the combination of

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references do not meet all of the elements of the independent claims.

Applicants are also providing objective evidence of commercial success and industry respect for the invention in the form of a declaration by Scott Morling, Director of Magnetic Papers, MeadWestvaco Corp. so that if a *prima facie* case of obviousness had been made out, there is yet further evidence of non-obviousness. The declaration further supports the patentability of the subject matter disclosed and claimed in the above-referenced patent application. Accompanying the declaration, is a Supplemental to the Scott Morling Declaration which includes information which is considered confidential business information exempt from FOIA disclosure under FOIA exemption 4 (5 U.S.C. 552(b)(4),

It has long been recognized that *objective evidence* of non-obviousness may be used to rebut a *prima facie* case of obviousness based on prior art references. Among the relevant objective, secondary considerations are: (1) copying; (2) long-felt, but unresolved need; (3) the failure of others; (4) commercial success; (5) unexpected results created by the claimed inventions; (6) unexpected properties of the claimed inventions; (7) licenses revealing industry respect for the invention; and (8) skepticism of skilled artisans before the invention. See *In re Rouffet*, 149 F.3d 1350, 1355 [47 USPQ2d 1453] (Fed. Cir. 1998); *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 [148 USPQ 459] (1966); *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *Arkie Lures, Inc. v. Gene Larew Tackle, Inc.*, 119 F.3d 953, 957, 43 USPQ2d 1294, 1297 (Fed. Cir. 1997); *Pentec, Inc. v. Graphic Controls Corp.*, 776 F.2d 309, 316, 227 USPQ 766, 771 (Fed. Cir. 1985).

The consideration of the objective evidence presented by the patentee is a necessary part of the obviousness determination. See *In re Rouffet*, 149 F.3d at 1355, 47 USPQ2d at 1456.

Applicants submit that the license taken by Meadwestvaco Corporation under U.S. Patent Application Serial No. 09/990,109 dated January 1, 2003, is evidence of industry respect for the invention, and is thus objective evidence of the non-obviousness of the invention

Applicants are also including sales based on the tonnage of product sold supplied by MeadWestvaco which is included in the Supplemental to the Scott Morling declaration as it is considered to be confidential business information. The products sold are made according to the process which is described and claimed in U.S. Patent Application Serial No. 09/990,109.

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The required nexus exists between the products sold by MeadWestvaco Corporation which are made according to the process disclosed and claimed in U.S. Patent Application Serial No. 09/990,109 and the commercial success. "A prima facie case of nexus is generally made out when the patentee show both that there is commercial success, and that the thing (product or method) that is commercially successful is the invention disclosed and claimed in the patent." *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F. 2d 1387, 1392, 7 USPQ2d 1222, 1226 (Fed. Cir. 1988).

XI. Double Patenting

Claim 1 has been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 9, 12, 14, 15 and 27 of copending Application No. 10/274189. Applicants will file a terminal disclaimer upon allowance of any of the conflicting claims.

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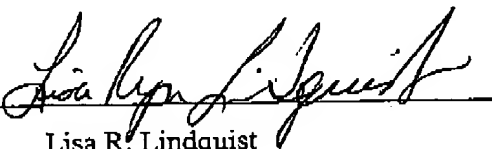
CONCLUSION

Claims 1-17, 19-42, 45-60, 72, 75, and 77-80 are pending in the application. Applicants have addressed each of the issues presented in the Office Action. Based on the foregoing, Applicants respectfully request reconsideration and an early allowance of the claims as presented. Should any issues remain, the attorney of record may be reached at (952)563-3011 to expedite prosecution of this application.

Respectfully submitted,

VIDAS, ARRETT & STEINKRAUS

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